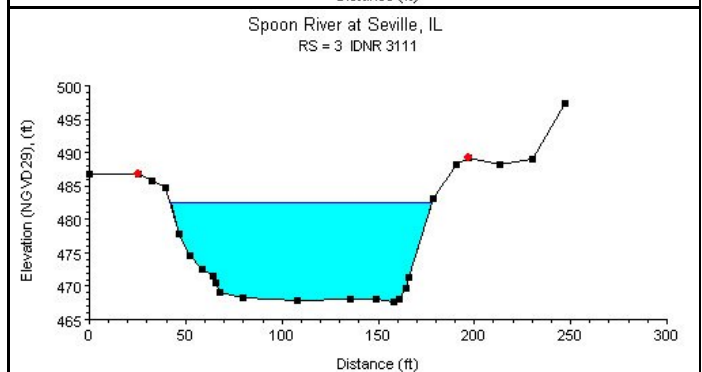
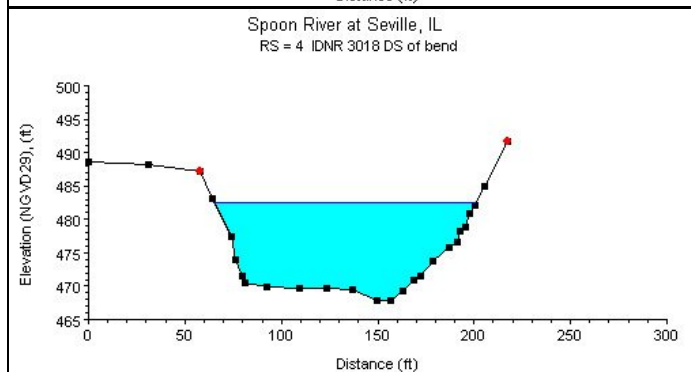
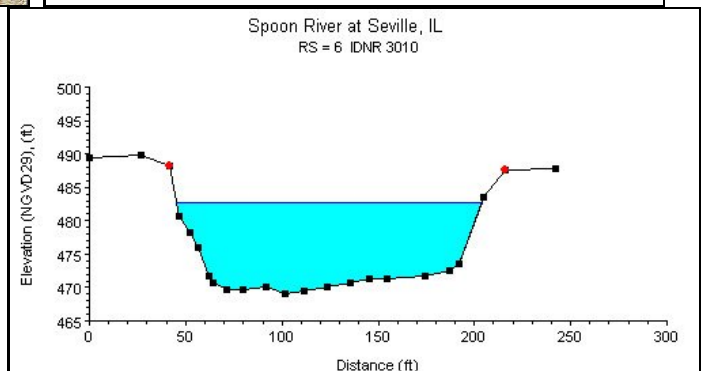
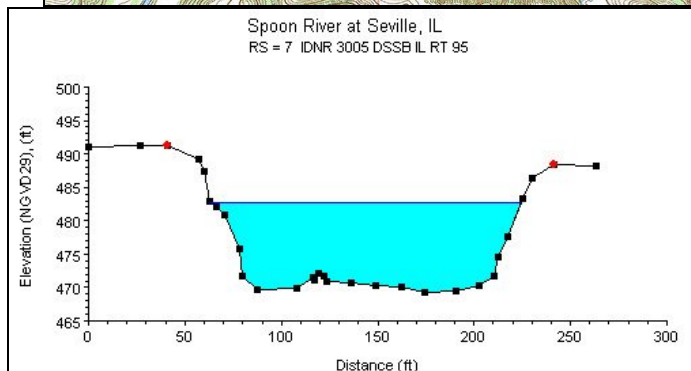
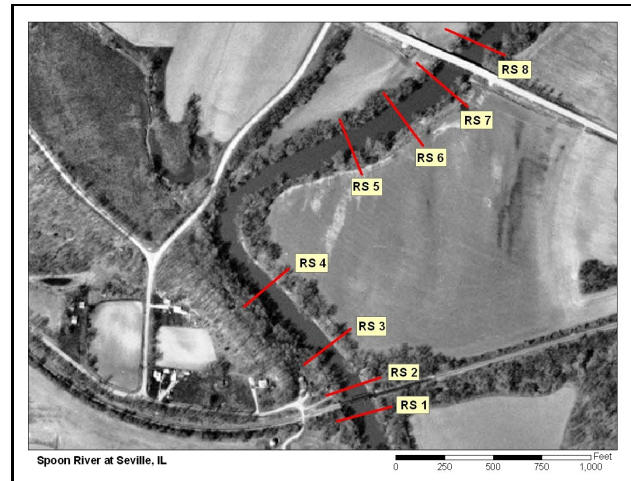
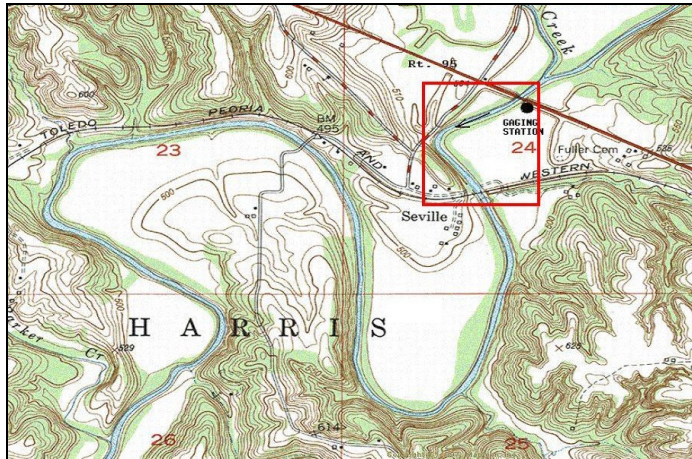


Spoon River at Seville, IL



Study Reach.--The channel reach under consideration is the meandering natural river, shown in the quadrangle map on the top left. A study reach, approximately 2,850 ft long, was selected as the segment extending from 150 ft upstream of the USGS gage to 200 ft downstream of an abandoned bridge about 2,500 ft downstream from the highway. There are eight surveyed cross sections (surveyed by the Illinois Department of Natural Resources, August 2003) available for evaluating the channel geometries in the study reach. The alignment of the study reach, approximate variations in channel width and bank conditions, and locations of surveyed cross sections are shown in the aerial photo on the top right. Cross-sectional plots at four locations, river station (RS) 7, 6, 4, and 3 are considered representative of the study reach (see plots above).

Gage Location.--Lat 40°29'24", long 90°20'25", SE1/4 NW1/4 sec.24, T.6N., R.1E., Fulton County, Hydrologic Unit 07130005, on left bank at downstream side of State Highway 95 bridge, 0.5 mi upstream from a railroad bridge, 0.5 mi

northeast of Seville, 0.1 mi downstream from Shaw Creek, and at river mi 39.2. The USGS streamage-station number is 05570000.

Drainage Area.--1,636 sq mi.

Gage Datum and Elevations of Reference Points.--Datum of the gage is 467.04 ft. A wire-weight gage (WWG) is located on the downstream side of State Highway 95 bridge. The WWG located on the downstream side of the abandoned bridge was removed in early 2006. TRP-1 was established on the downstream side of the abandoned bridge as two file marks on the bridge railing, near the previous location of the old WWG. All elevations are in NGVD 1929 convention.

Stage, Discharge Measurements, and Computed n-Values.--Water-surface elevations were measured at the upstream WWG and downstream TRP-1 before and after each discharge measurment. Discharge measurements are made using the conventional current-meter method. The computed n-values are listed in the following table. Whenever possible, the computed n-values are associated with a photo taken at the time of the measurement. The photos are arranged from low stage to high stage in order to illustrate contributing factors of n-values at a particular stage.

Date of Observation	Discharge (ft ³ /s)	Average Cross Section Area (ft ²)	Hydraulic Radius (ft)	Mean Velocity (ft/s)	Slope	Coefficient of Roughness <i>n</i>
3/23/2004	682.0	476.5	3.79	1.47	0.000116	0.019
7/13/2004	1500.0	723.6	5.38	2.10	0.000168	0.023
4/13/2005	1760.0	854.6	6.15	2.08	0.000176	0.025
5/7/2002	1810.0	842.9	6.09	2.17	0.000160	0.024
2/14/2005	2920.0	1049.8	7.28	2.80	0.000184	0.023
4/17/2006	3120.0	1163.9	7.91	2.70	0.000189	0.026
2/16/2005	4090.0	1324.0	8.76	3.11	0.000188	0.025
5/13/2003	4360.0	1541.4	9.86	2.85	0.000172	0.028
11/3/2004	5070.0	1738.3	10.75	2.93	0.000200	0.032





05570000 Spoon River at Seville, IL
Low flow, looking upstream from left bank

7/10/2007



05570000 Spoon River at Seville, IL
Low flow, looking downstream at abandoned bridge

7/10/2007



05570000 Spoon River at Seville, IL
Looking at right bank



05570000 Spoon River at Seville, IL
Looking Downstream from Bridge

06/23/05



05570000 Spoon River at Seville, IL
Low Water Control one third mile Downstream

06/23/05



05570000 Spoon River at Seville, IL
Looking Downstream from bridge

04/13/05

Description of Channel.--This channel is natural. The bed materials consist of primarily silt, sand, and a moderate spread of gravels. The channel can be described as trapezoidal in shape. The bottom width of the channel averages about 150 ft. The banks are generally firm soil densely lined with trees on the upper portion of the banks, so much so that the trees overhang the river. The bank heights are approximately 20 ft and very steep in some places. The top width is about 175 ft. Overall cross sections can be considered relatively uniform in the study reach. The study reach is meandering with one sharp bend greater than 90 degrees.

Floods.--Maximum discharge, 37,300 ft³/s, Aug. 22, 1924, gage height, 30.77 ft, from graph based on gage readings; maximum gage height, 33.10 ft, July 26, 1993, discharge 34,700 ft³/s. Flood of 1883 reached a stage of 33.0 ft, ice jam,

discharge not determined.

Estimated n-Values using Cowan s Approach.--0.035 - 0.05